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Digitized Engineering Notebook

Bhargav Bolugoddu
Governors State University

Venkata Sharath Madamraju
Governors State University

Shamili Meneni
Governors State University

Anil Kuma Tanneru
Governors State University

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ABSTRACT

Digitized Engineering Notebook is a Web site application that simulates and transforms the characteristics of a paper notebook used for recording details of laboratory works into a digital version of such notebook. This is a web based application developed using the technologies like C#.Net, Asp.Net 4.0, Sql server 2014 as Database, JavaScript, CSS and few scripts and styles.

Since the notebook is a permanent, documented and primary record of what you are doing in the laboratory:

Digitized Engineering Notebook allows users to store records of text, data, and images to a database, and at the same time provides functionalities for easy access. Digitized Engineering Notebook also allows users to create and edit files online while collaborating with other team members in real-time.

Both user and administrator should appreciate that the format guidelines for notebooks are derived from the use of the notebooks as a legal document.

Major features include front page with a menu, admin console for site administration, a list of existing project and creation of new projects, table of content, chronological listing of log entries, pages with multimedia, search, calendar of events, etc. Key functionalities include user login, log entry forms, file upload function, converting HTML to PDF, log printing, etc.

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1 Project Description:

Our project is to create, develop and deploy a Digital Engineering notebook. It is based on inexpensive technology, something like notebook must simplify taking of information notes, faster and better utilizing notes, increases more informed different notes, and easy collaborative study work. Overall, it will provide the users with a better experience and also enhance learners' interactions.

1.1 Competitive Information

One digital notebook competitor is Mod Notebooks. When customers are once done with writing in their notebooks, they can also e-mail those notes directly to the company to be digitalized. These notebooks once finished costs \$29.00, and are sold through the company's website. Due to this advanced feature, MOD Notebooks are one of the competitors. Even though, our team is trying to add advancements as possible in the project to be the best.

1.2 Relationship to Other Applications/Projects

Applications are frequently open from desktop PCs, cell phones, and laptops, so we have simple access to our notes or records wherever we go this feature in all digital notebook is common. Advanced digital applications make it simple to refresh our list of notes and scratched-out things to divert us from what's left to be finished.

There are so many applications like our project but the major relationship is creating a Digital notebook. Other than that, we have variant features from other Notebook Projects.

1.3 Assumptions and Dependencies

- Any development tools the website needs to use at the start of the project will still be available during the whole course of the development process.
- A set of requirements deals with the need to make the Digital engineering notebook reliable and robust. The digital notebook should be fast enough that performance problems do not get in the way of note-taking. Our current project prototypes are just fast enough, and we are expecting that in the next updating hardware will be adequate to meet the anticipated needs.

1.4 Future Enhancements

In addition, we are trying to use some communications techniques to facilitate and speed up the downloading of appropriate material. The hardware and the software of the digital notebook should be reliable enough that it can be easily available to the users when they need it and should provide reasonable guarantees that information or data, once written, becomes permanent.

1.5 Definitions and Acronyms

Several acronyms will be used. Their definitions are:

Varchar: Variable character

Int: Integer

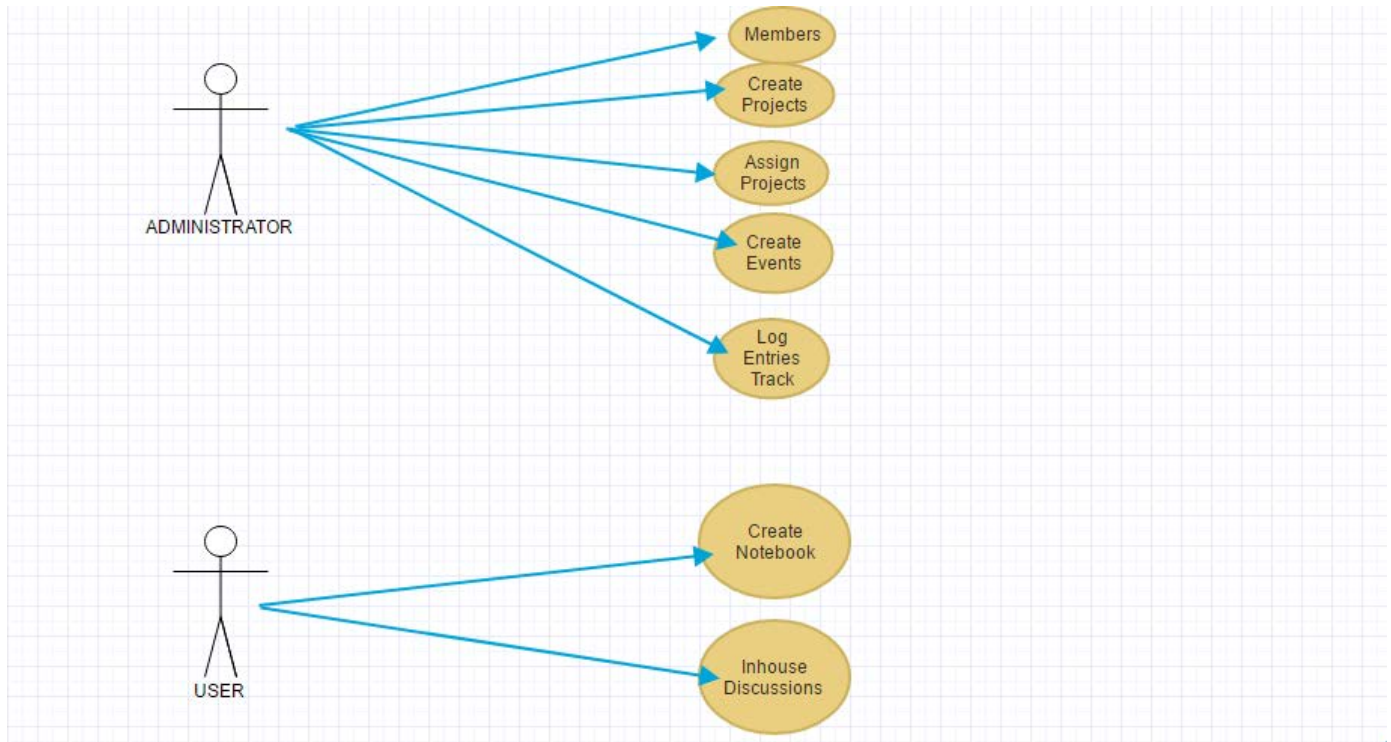
2 Project Technical Description

The project is developed with .Net version Microsoft Sql server 2014 and front design is used to develop the website back end we used visual studio 2015. Where the inserted data will be saved in the database.

This data consists of pictures, videos, text data format. Where the files can be stored in all kind of format Pdf version, word, jpg etc. Where we can get the log entries of the logged in users which is one of the example, those log entries will be printed in pdf format.

Major features include front page with a menu, admin console for site administration, a list of existing project and creation of new projects, table of content, chronological listing of log entries, pages with multimedia, search, calendar of events, etc. Key functionalities include user login, log entry forms, file upload function, converting HTML to PDF, log printing, etc.

2.1 Application Architecture.



2.2 Application Information flows

- In this project user can able to create his or her own project notes through online and the data will safe and secure.
- Administrator can able to create the new users and new projects, assign to projects to specific users.
- Both user and administrator inserted data will be stored in the database.
- Administrator can able to send message to all the users if any event is happening on specific date with the help of events tab.
- User can able to send message to another user with the help of discussion tab.

2.3 Interactions with other Projects (if Any)

Not applicable.

2.4 Interactions with other Applications

Not applicable.

2.5 Capabilities

In the project users and admin can able to create, delete, update the projects.

2.6 Risk Assessment and Management

In risk assessment, the entire process of risk management is done by providing methodologies for determining the sources of digital engineering notebook risk, and once threats or problems have been found, managing them through; assessment and identification (risk break-down) implementing of risk measures for their prevention, mitigation, or complete reduction; evaluating risk impacts on the website is done.

As far as we are concerned we found security of the information in the digital notebook is main risk. We tried to overcome that using single admin system in our project.

3 Project Requirements

3.1 Identification of Requirements

This section provides a brief explanation of the use of named and enumerated requirements to identify and number requirements.

- **Specific** – target a specific area for improvement.
- **Achievable** – specify what will be accomplished
- **Realistic** – state what results can realistically be achieved, given available resources.

The following Operations, Administration, Maintenance, and Provisioning (OAM&P)

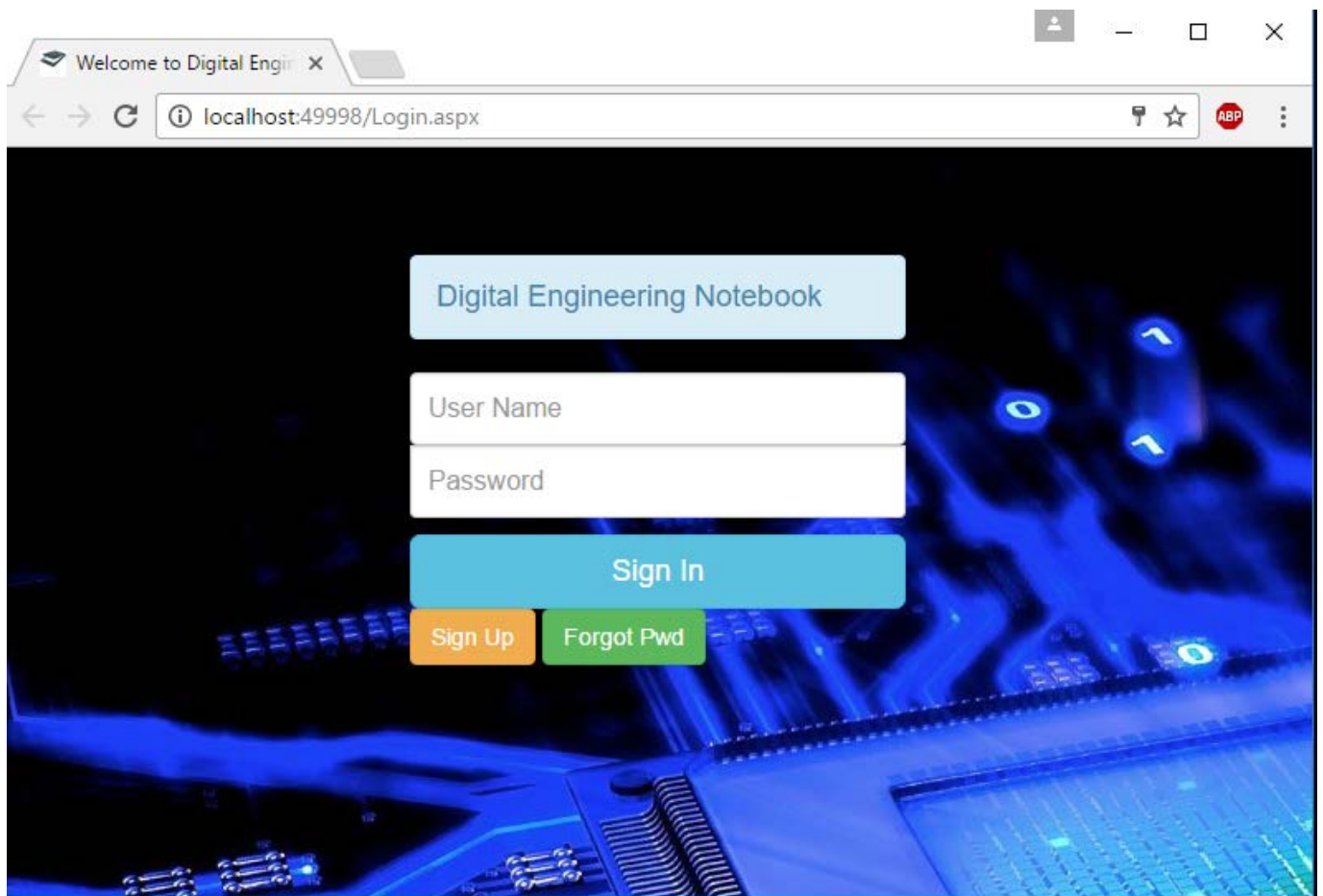
Our website is Admin authority based. Every user or team member can use website with the one-time permission of the admin, later admin can edit or delete the user profile. This way the information in the website will be secured and monitored. All the operations in the website will be controlled and maintained by admin. The users or team members have limited access to the website, even though they can do all the primary operations to complete their project.

3.2 Security and Fraud Prevention.

The fraud prevention will be taking care by administrator by checking then log entries if any unauthorized user is found it will be deleted. Only the authorized users can able to log in. Either Administrator should give the user credentials to new or they can sign up through online. If the user forgets the password.

3.3 Release and Transition Plan

This section explains about the admin and user login activities which is performed systematic procedure to execute.



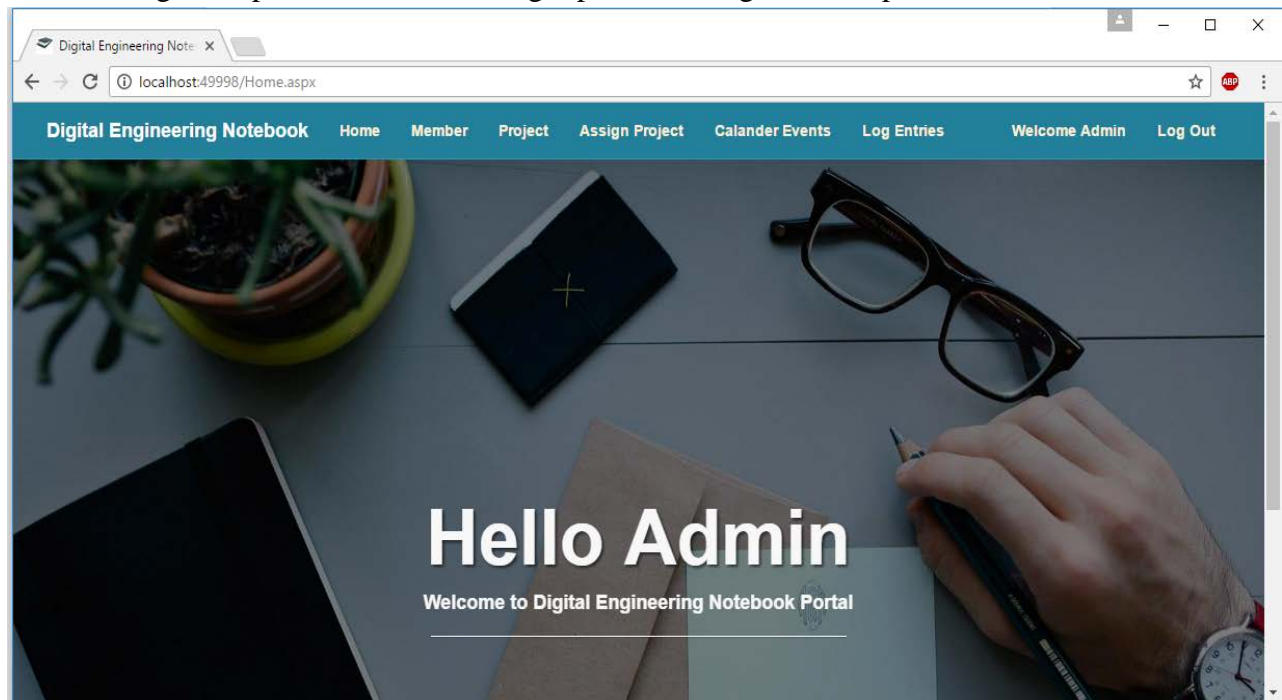
The screenshot displays a web browser window with the following elements:

- Browser Tab:** "Welcome to Digital Engin" with a close button (X).
- Address Bar:** Shows the URL "localhost:49998/Login.aspx".
- Page Title:** "Digital Engineering Notebook" in a light blue box.
- Form Fields:** Two white input fields labeled "User Name" and "Password".
- Buttons:** A large blue "Sign In" button, an orange "Sign Up" button, and a green "Forgot Pwd" button.
- Background:** A blue-toned image of a circuit board with glowing components.



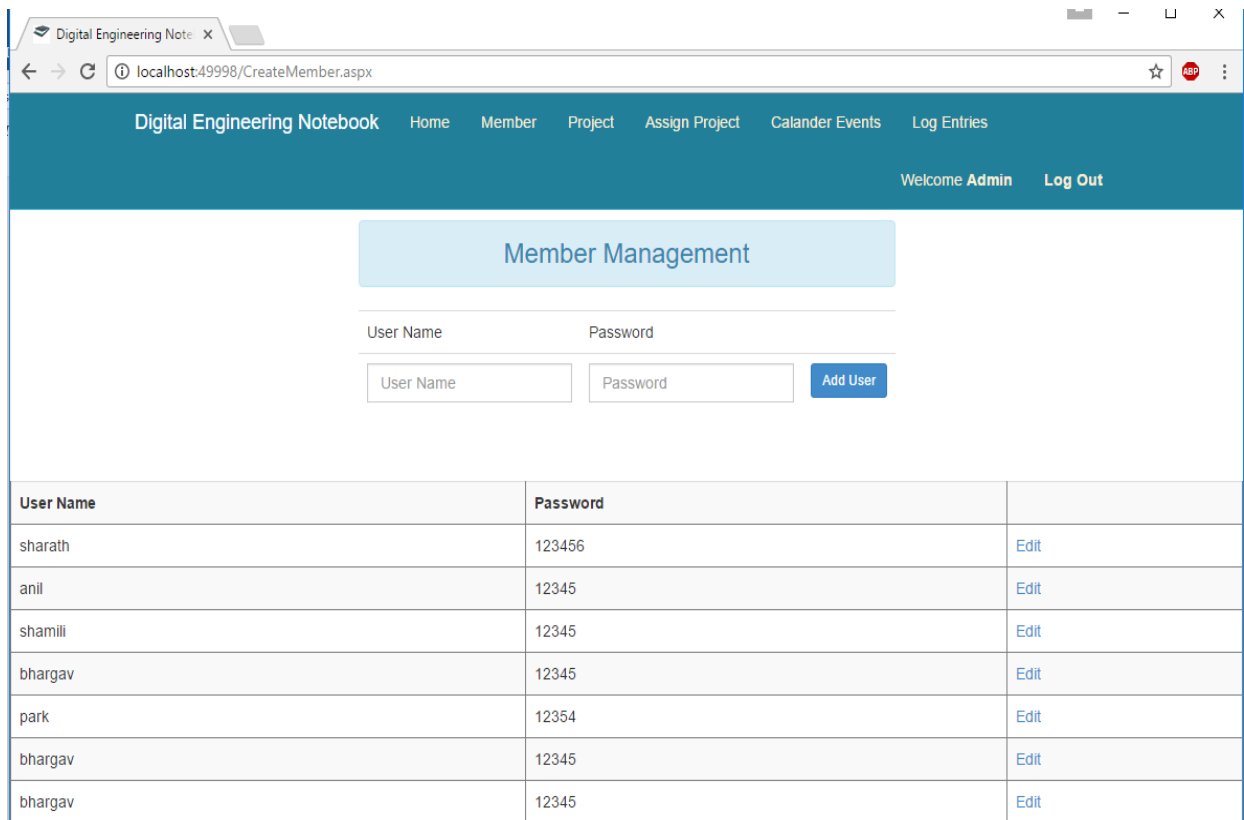
This is the first screen of the digital engineering note book. Where this is login page and username and password.

To create new account, need to click on sign up page and create the account and if any case if the user has forgot the password click on forgot password to get the old password.



This above screen shows once the admin is logged in he will see this page. Where you can see

home, member, project, assign project, calendar events, log entries, welcome admin and choose option to logout as admin



Digital Engineering Notebook

Home Member Project Assign Project Calander Events Log Entries

Welcome Admin Log Out

Member Management

User Name Password

User Name Password Add User

User Name	Password	
sharath	123456	Edit
anil	12345	Edit
shamili	12345	Edit
bhargav	12345	Edit
park	12354	Edit
bhargav	12345	Edit
bhargav	12345	Edit

The above screenshot shows about the member management where you can add the user here and list of the users available along with their passwords.

Where you can change user's passwords and name with the edit option.

Project Management

Project Name Description

Project Name Description Add Project

Project Name	Description	
project1	Hello	Edit
project2	New project	Edit

This section explains about the project where admin can add new projects and edit the existing projects by giving a name to the project and complete description about the project.

Assign Members to Project

Projects : anil

Unselected Members Selected Members

PROJECT2 PROJECT1

>> <<

Submit Cancel

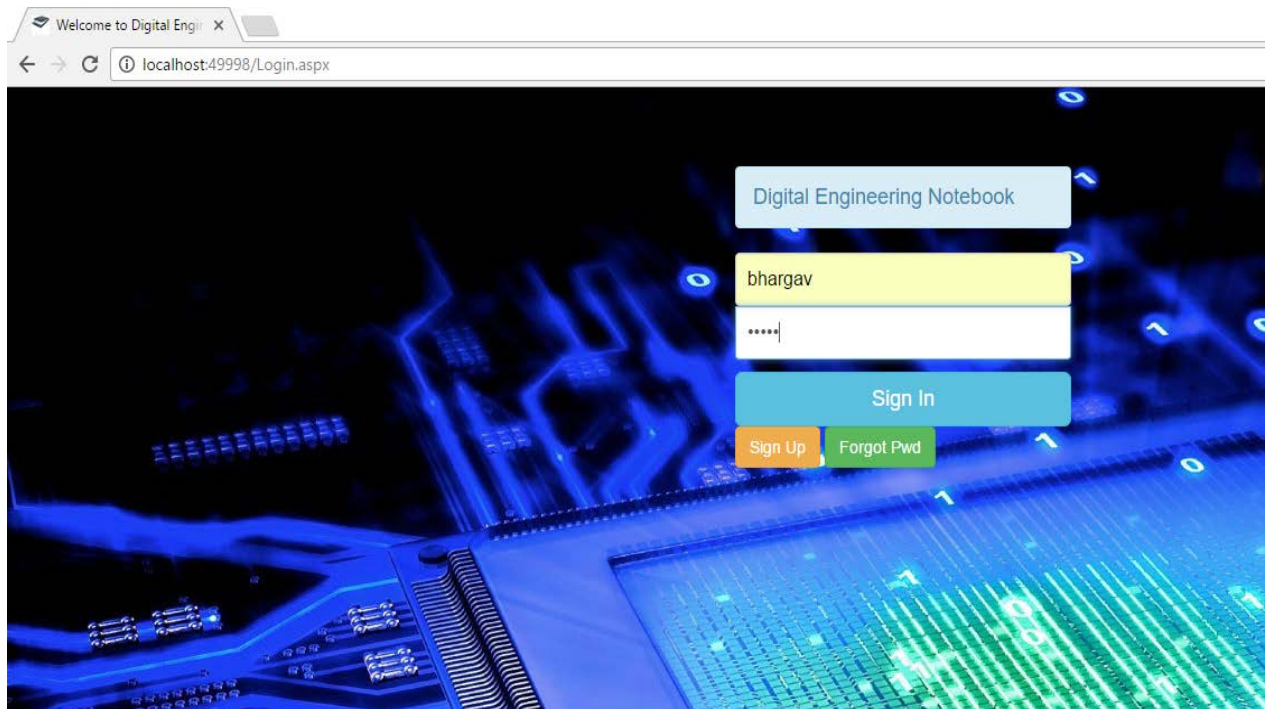
This is an Assign Project section where the projects will be assigned accordingly to the projects by selecting their usernames.

	Message	Date
Edit Delete	Today is our first project presentation	2017-04-05
Edit Delete	Today is our first project presentation	2017-04-05
Edit Delete	This is final documentation	2017-04-18

This is the calendar events sections where the announcement management will be involved in this where this message will be displayed to all the users who have account to digital engineering notebook and admin have an option to edit and delete the events which were already initiated.

User Name	Login Time	Logout Time
anil	4/5/2017 2:06:04 PM	4/5/2017 2:09:02 PM
anil	4/5/2017 2:10:23 PM	4/5/2017 2:30:14 PM
anil	4/5/2017 2:40:48 PM	4/5/2017 2:42:41 PM
anil	4/5/2017 2:46:06 PM	4/5/2017 2:46:17 PM
bhargav	4/18/2017 9:03:10 AM	4/18/2017 9:03:18 AM

The above screen displays about the log entries once the user is logged in admin can able to see at what time which user is logged in and at what the user have logged out from digital engineering notebook. Where admin can also print the job listings in the PDF format.



This is the user login page which consists of same as admin, username and password and signup for creating new account if the existing user forget the password they can click on forgot password which will show the screen below.

localhost:49998/ForgotPwd.aspx

User Name Email ID

bhargav bhargav.us96@gmail.com Get Password

Password is : 12345

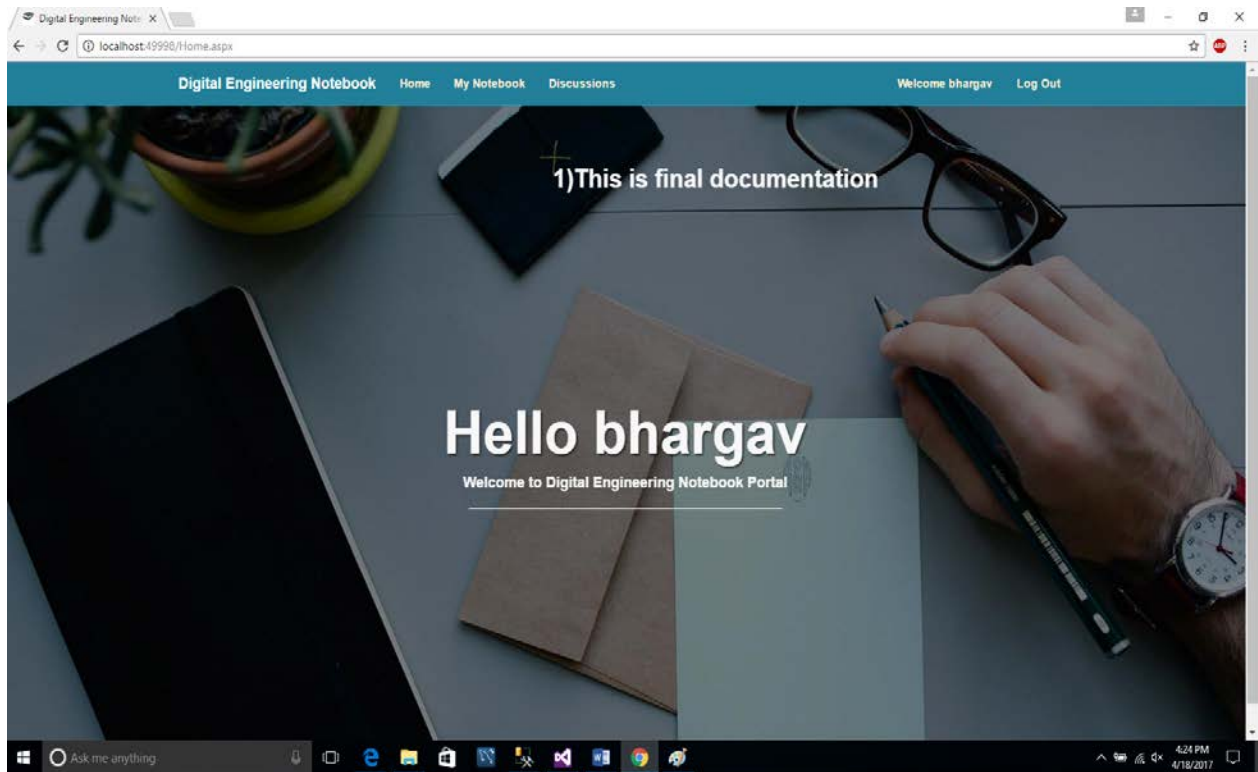
Once the user enters the username and email id once they click on get password once both username and email id are correct it will display the password to that user.

localhost:49998/SignUp.aspx

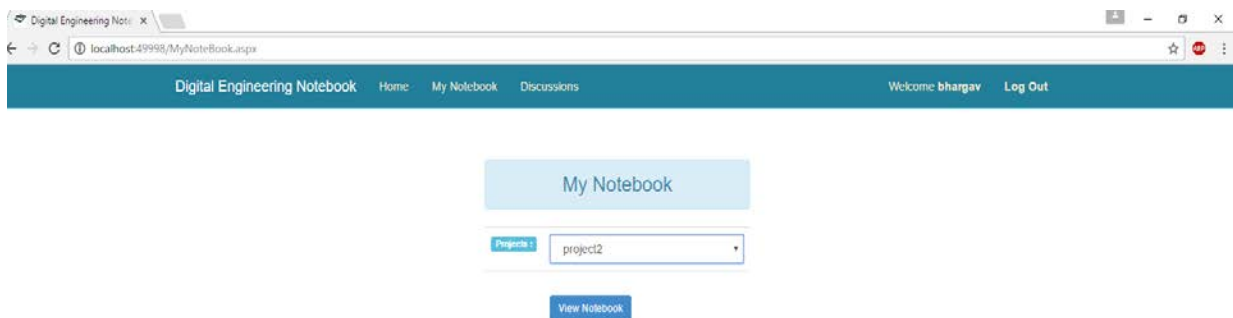
User Name Password Email ID

User Name Password EmailId Sign Up

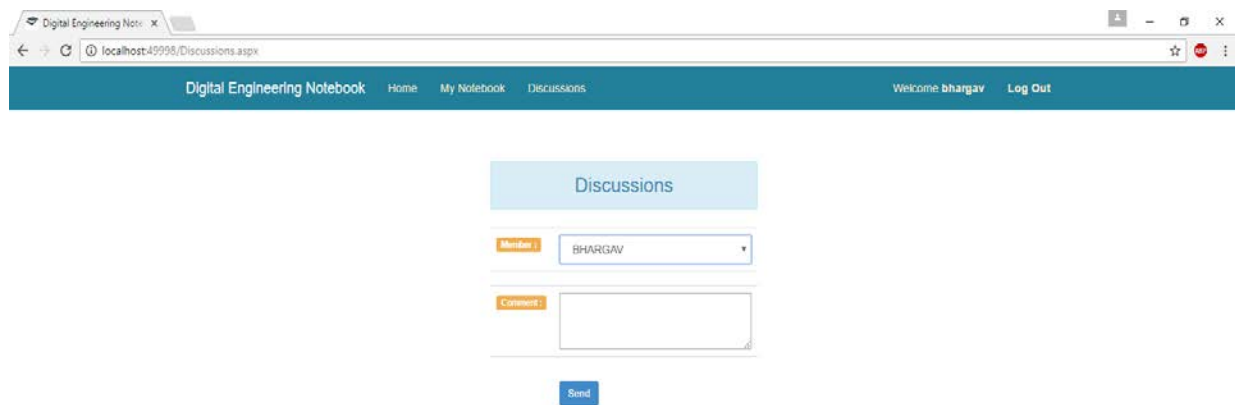
The above page is the sign-up page which includes to signup is user name, password, email id and click on signup which creates the account



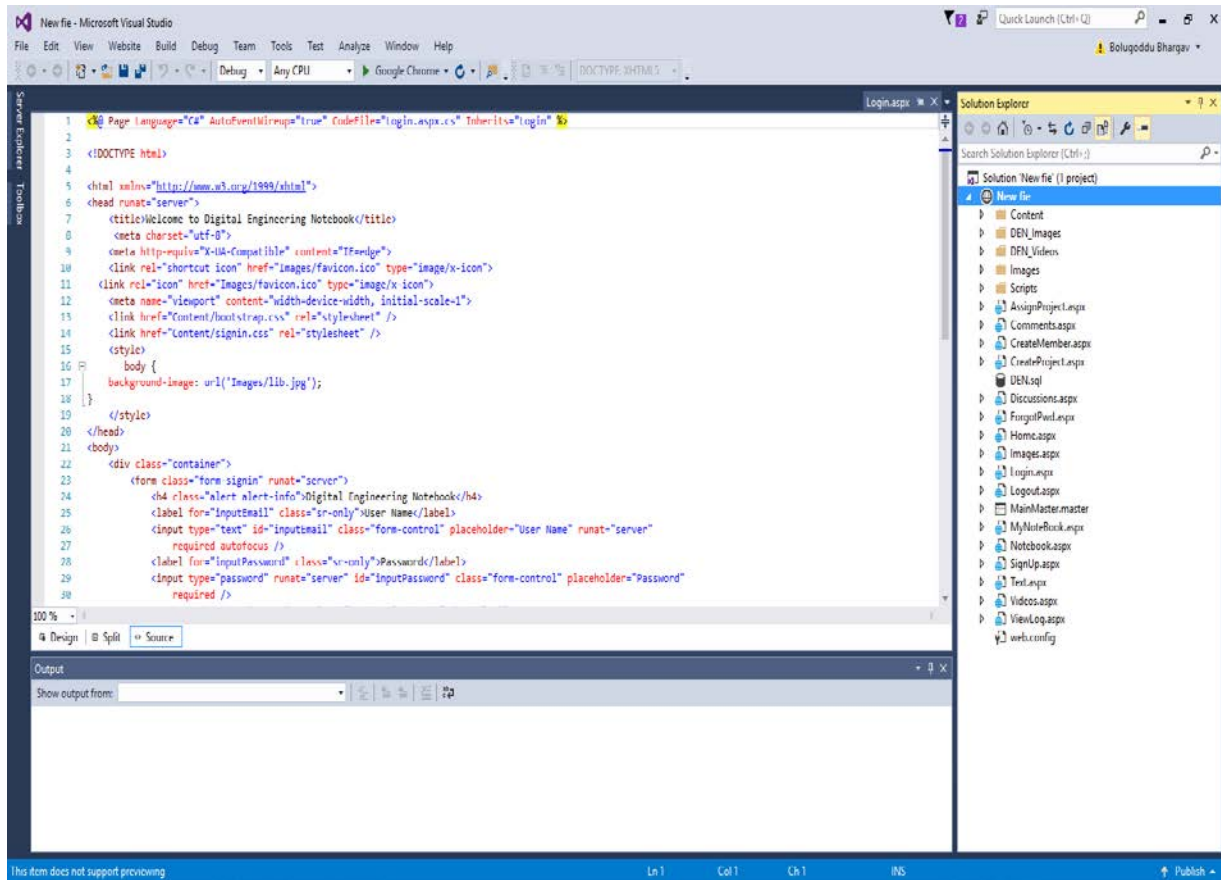
Once the user login he will see the welcome note with his first name and greeting display which says welcome to digital engineering notebook portal. Where you can see the calendar events message which is scrolling on the top displaying “This is final documentation”. Where the tabs consist of My Notebook, Discussions, logout.



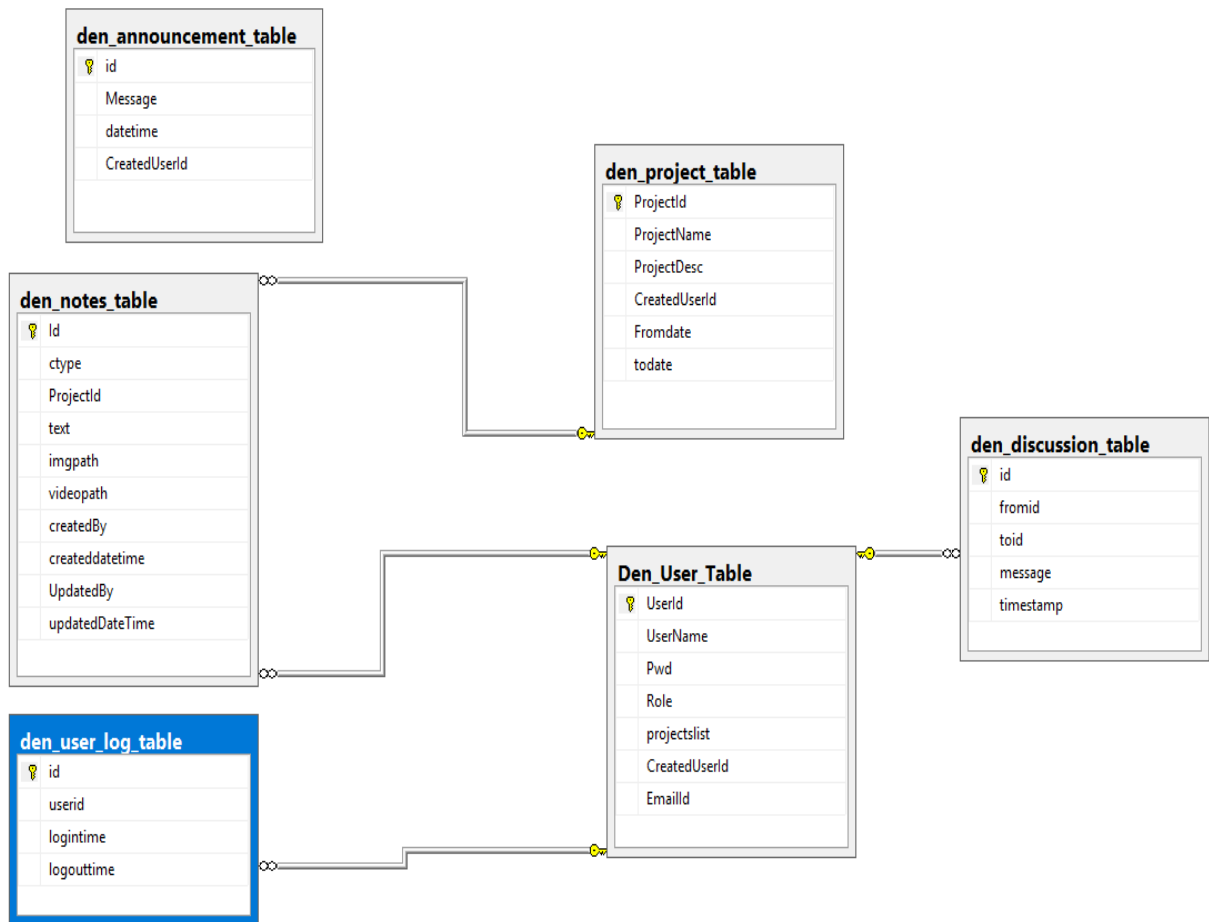
The user has his own assigned notebooks by admin where he can view the projects which were assigned to him to complete information will be loaded in in with the image and video and the notes. As follows



Where the above is the discussions page all the list of members will be available in the section where you can select specific name the user want to comment once you click on send, that message will be displayed in the discussion.



The above screenshot shows the coding of .Net.



The above screenshot displays completely about the Database tables and ER diagram where DEN is the database name.

4 Project Design Description

The following functionality will be available in this project.

1. Admin login and logout
2. User login and logout.
3. User authentication and authorization.
4. Admin will be able to add users as members to this website.
5. Assigning the projects and creating the projects.
6. Event notification will be sent to all the users with calendar of events with specific dates.

7. Log entries will be available which consists of user logged in time and logged out time.
8. Signup and forgot password are available for new users and existing users.
9. Once user logs in they can able to see the assigned projects to them in My notebook.
10. Discussions is one of the option to communicate all the users in the website.

5 Internal/external Interface Impacts and Specification

No Impacts

6 Design Units Impacts

No Impacts

6.1 Functional Area A/Design Unit A

6.1.1 Functional Overview

- a) The users who will be associated in the members list will be notified with calendar of events where if something needs to be done by all the users they will receive a message from admin.
- b) Admin plays the major role in assigning the projects to all the members in the group and only projects assigned to their accounts will be displayed to the users they cannot see unassigned project to them.
- c) All the information about the project will be available in my notebook where users can see the notes with the Text document, Images, Videos.
- d) Discussions is one of the important section in digital engineering notebook which helps to communicate with the all users.

6.1.2 Impacts

No Impacts

6.1.3 Requirements

This project requirement consists of my notebook which consists of users can develop the project with the documentation with the explanation of the videos and images.

Admin can able to create the users with the unique password, Where the user authentication is required.

Admin can run the log entries which will able to show up the login and logout details to do the print in PDF format. Where we can see how many users logged in today to the notebook.

6.2 Functional Area B/Design Unit B

6.2.1. Functional Overview

Admin login and logout, User login and logout. User authentication and authorization. Admin will be able to add users as members to this website. Assigning the projects and creating the projects. Event notification will be sent to all the users with calendar of events with specific dates. Log entries will be available which consists of user logged in time and logged out time. Signup and forgot password are available for new users and existing users. Once user logs in they can able to see the assigned projects to them in My notebook. Discussions is one of the option to communicate all the users in the website.

6.1.4 Impacts

No Impacts

6.1.5 Requirements

This project requirement consists of my notebook which consists of users can develop the project with the documentation with the explanation of the videos and images.

Admin can able to create the users with the unique password, Where the user authentication is required.

Admin can run the log entries which will able to show up the login and logout details to do the print in PDF format. Where we can see how many users logged in today to the notebook.

7 Open Issues

No Open issues.

8 Acknowledgements

This Engineering Note Book project was done with my own knowledge and documentation done by myself.

Thanks for the Professor Spark who helped me in creating this document.

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